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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/063,087	03/18/2002	Ching-Pang Lee	RD-27955	4843

6147 7590 11/03/2003

GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH CENTER
PATENT DOCKET RM. 4A59
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EXAMINER

NICOLAS, WESLEY A

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 11/03/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

CLO-5

Office Action Summary	Application No. 10/063,087	Applicant(s) LEE ET AL.	
	Examiner Wesley A. Nicolas	Art Unit 1742	

-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 and 25-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

This is in response to the election dated October 6, 2003. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-32 are currently pending in this application, with claims 1-8 and 25-32 being drawn to a non-elected invention.

Election/Restriction

1. Applicant's response to the restriction requirement has been considered. However, since Applicant has not provided express admission that the claimed inventions are indistinct as required by Lee, the restriction as set forth in the previous Office action has been maintained. In re Lee, 199 USPQ 108 (Deputy Asst. Comm'r. for Pats 1978). The restriction is hereby being made **FINAL**.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA

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1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1 and 24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 16-22 of U.S. Patent No. 6,554,571 ('571). Although the conflicting claims are not identical, they are not patentably distinct from each other because Applicant is using different words for the same features/steps. For example, in the instant invention, Applicant's claims refer to "rejuvenating at least one cooling passage" and in '571 Applicant refers to a "method for forming a curved turbulator configuration on an inner surface of a leading wall of an airfoil", where they are both substantially identical.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 9, 17, 21, 23, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Wei et al. (6,200,439).

Claim 9 is rejected because Wei et al. teach an electrochemical machining method for rejuvenating at least one cooling passage within an airfoil, said electrochemical machining method comprising:

- preparing an inner surface of the cooling passage for electrochemical machining, including removing residue from the inner surface (Abstract and col. 2);
- positioning an electrode in the cooling passage, the electrode comprising a conductive core and an insulating coating, the insulating coating exposing a plurality of exposed portions of the conductive core (col. 2, lines 30-55); and
- machining a groove pattern on the inner surface of the cooling passage using the exposed portions of the conductive core by passing an electric current between the electrode and the airfoil while circulating an electrolyte solution through the cooling passage, said machining producing a rejuvenated cooling passage (cols. 1 and 2).

Claim 17 is rejected because Wei et al. teach that the electrode further comprises a tip and an end, the conductive core extending between the tip and the end, wherein the exposed portions comprise conductive strips of the conductive core extending between the tip and the end of the electrode (col. 5), wherein the insulating coating comprises a plurality of insulating portions which substantially extend between the tip and the end of the electrode (col. 5), the insulating portions being positioned

between the conductive strips to form an alternating pattern, wherein said machining of the groove pattern uses the alternating pattern, and wherein the groove pattern comprises a plurality of alternating grooves and fins (col. 5).

Claim 21 is rejected because Wei et al. teach that the insulating coating further exposes a plurality of spacer portions of the conductive core, the spacer portions being longitudinally positioned between the insulating portions, and wherein the groove pattern further includes a plurality of connectors, each connector being longitudinally positioned between two of the fins and connecting two of the grooves (col. 5).

Claim 23 is rejected because Wei et al. teach that the airfoil comprises a vane airfoil, the cooling passage comprises a central passage, and the conductive core conforms to a shape of the central passage (cols. 1 and 5).

Claim 24 is rejected because Wei et al. teach that an electrochemical machining method for rejuvenating at least one cooling passage within an airfoil, said electrochemical machining method comprising:

- positioning an electrode (Fig. 3, numeral 105) in the cooling passage (Fig. 3, numeral 101), the electrode comprising a tip, an end, a conductive core extending between the tip and the end, and an insulating coating disposed on the conductive core (col. 5), the insulating coating exposing a plurality of conductive strips of the conductive core extending between the tip and the end, the insulating coating forming a plurality of insulating portions substantially spanning a distance between the tip and the end and positioned between the conductive strips (col. 5), and the insulating coating further exposing a plurality of spacer portions of the conductive

core longitudinally positioned between the insulating portions (col. 5 where the "spacer portions" are exposed areas 104); and

- machining a groove pattern on the inner surface of the cooling passage using the conductive strips and spacer portions of the conductive core by passing an electric current between the electrode and the airfoil while circulating an electrolyte solution through the cooling passage (col. 1), said machining producing a rejuvenated cooling passage (col. 1: "cooling features").

Allowable Subject Matter

6. Claims 10-16, 18-20, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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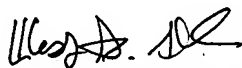
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley Nicolas whose telephone number is (703)305-0082. The examiner can normally be reached on Mon.-Thurs. from 7am to 5pm.

The Supervisory Primary Examiner for this Art Unit is Roy King whose telephone number is (703) 308-1146.

The fax number for this Group is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.


WESLEY A. NICOLAS
PATENT EXAMINER

October 30, 2003